

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF VIRGINIA
ROANOKE DIVISION

DE Technologies, Inc. (“DE”) filed this patent infringement action against Dell, Inc. (“Dell”), alleging that Dell implements the technology described and claimed by DE in U.S. Patent No. 6,460,020 (“the ‘020 Patent”) and U.S. Patent No. 6,845,364 (“the ‘364 Patent”). This court has jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338.

The case is currently before the court on various motions for summary judgment filed by the parties. Specifically, Dell has filed five motions for summary judgment or partial summary judgment as to non-infringement: (1) as to the transaction program limitation; (2) as to the electronic record limitation; (3) as to the currency menu limitation of the ‘020 Patent; (4) as to U.S. laptop online orders; and (5) as to Latin American online orders. DE has filed a motion for partial summary judgment on anticipation under 35 U.S.C. § 102, and Dell has filed a cross-motion for partial summary judgment on anticipation. In addition, DE has filed a motion for partial summary judgment on the issue of inequitable conduct, to which Dell has responded with a cross-motion for summary judgment, arguing that the patents at issue are unenforceable based on DE’s inequitable conduct.

FACTUAL BACKGROUND AND PROCEDURAL HISTORY

Dell is a company that sells computers, and was one of the first to make extensive use of online sales. Dell now sells computers internationally by employing an interactive website. Using the website, customers can design and purchase computer systems to their specifications. Some computers are assembled in a country other than that of the customer; for example, Dell has entities in Malaysia and Ireland that manufacture laptops sold in the United States.

The Dell Order Management System (DOMS) is a computer program used in the processing of Dell's orders. Three specific "variations" of DOMS programs are relevant to this case: USDOMS, which serves the United States and some Latin American countries; LADOMS, which serves some Latin American countries; and CADOMS, which serves Canada. An external application called TradeSphere creates the international shipping documents for online sales.

The patents at issue in this case claim a computer system for facilitating international computer-to-computer commercial transactions by integrating certain functions which enable international purchases of goods over the internet. DE's '020 Patent, listing Ed Pool and Doug Mauer as inventors, was filed on December 29, 1997. It was issued on October 1, 2002. Claim 1 of the '020 Patent discloses:

A computer implemented process for carrying out an international commercial transaction comprising:
running a transaction program on a computer system so as to integrate processes including:
(a) selecting a language from a menu in which to view catalogue [sic] information on products;
(b) selecting a currency from a menu in which to obtain price information;
(c) selecting a product to be purchased and a destination for shipping such product to be purchased;

- (d) accessing at least one local or remote database for obtaining
 - (i) price information for the product to be purchased; and
 - (ii) a product code for an international goods classification system pertinent to such product; and
 - (iii) international shipping information related to an origination point of such product and said destination;
- (e) calculating costs involved in moving such product to said destination based upon said destination and such product;
- (f) determining a total cost of the transaction that includes a price of the product;
- (g) receiving an order for such product thereby triggering an electronic process for confirming existence of available funds; and
- (h) upon confirmation of availability of said funds, accepting said order, generating an electronic record, such record including the content of a commercial invoice, to facilitate passage of such product to said destination.

‘020 Patent, col. 17, ll. 2-33.

A continuation of the first patent was filed on June 29, 2000. That patent was issued on January 18, 2005. Claim 1 of the ‘364 Patent discloses:

A computerized process for carrying out an international transaction comprising: running a transaction program on a computer system so as to integrate processes including:

- (a) receiving a selection of a product to be purchased and a destination for shipping such product to be purchased;
- (b) accessing at least one local or remote database for
 - (i) price information for the product to be purchased; and
 - (ii) a product code for an international goods classification system pertinent to such product; and
 - (iii) international shipping information related to an origination point of such product and said destination;
- (c) calculating costs involved in moving such product to said destination based upon said destination and such product;
- (d) receiving an order for such product thereby triggering an electronic process for confirming existence of available funds; and
- (e) upon confirmation of availability of said funds, generating an electronic record, such record including the content of a commercial invoice, to facilitate passage of such product to said destination.

‘364 Patent, col. 15, l. 13 to col. 16, l. 2.

On October 27, 2004, DE filed a complaint in this court, alleging that Dell implements the technology described in the ‘020 Patent in conducting its international import and export business. The complaint was amended on January 20, 2005 to add allegations of infringement as to the ‘364 Patent.

The court held a Markman hearing, for claim construction, on November 9 and 10, 2005.¹ After the hearing, the court issued a claim construction opinion and order, construing the terms of the ‘020 and ‘364 Patents. DE Tech., Inc. v. Dell, Inc., 2006 WL 335608 (W.D. Va. Feb, 14, 2006). The court construed the following terms:

1. The phrase “running a transaction program on a computer system so as to integrate processes,” as used in Claim 1 of the ‘020 Patent and Claim 1 of the ‘364 Patent means “running a single transaction program which utilizes and communicates with such additional programs, databases, and systems as are necessary to enable the transaction program to integrate the recited processes (a) to (h) into one functional system for carrying out international commercial transactions;”
2. The phrase “selecting a language from a menu,” as used in Claim 1 of the ‘020 Patent means “choosing a language after presentation of a language menu and consideration of user input;”

¹Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995) (en banc), aff’d, 517 U.S. 370 (1996).

3. The phrase “selecting a currency from a menu,” as used in Claim 1 of the ‘020 Patent means “choosing a currency after presentation of a currency menu and consideration of user input;”
4. The phrase “international shipping information,” as used in Claims 1 and 13 of the ‘020 Patent and Claim 1 of the ‘364 Patent means “any information, including at least shipping options and associated costs, related to shipping a product internationally from its point of origination to its point of destination;”
5. The phrase “calculating costs involved in moving such product to said destination based upon said destination and such product,” as used in Claims 1 and 13 of the ‘020 Patent and Claim 1 of the ‘364 Patent means “determining all applicable costs of moving the selected product to said destination;”
6. The phrase “determining a total cost of the transaction that includes a price of the product,” as used in Claims 1 and 13 of the ‘020 Patent means “determining the total cost of the transaction borne by the buyer for obtaining a selected product at a selected destination that includes the price of the product;”
7. The phrase “upon confirmation of availability of said funds, accepting said order, generating an electronic record,” as used in Claim 1 of the ‘020 Patent and Claim 1 of the ‘364 Patent means “following determination that the funds are available, confirming acceptance of the order and generating an electronic record;”
8. The phrase “commercial invoice,” as used in Claims 1 and 13 of the ‘020 Patent and Claim 1 of the ‘364 Patent means “an international shipping document that

contains at least the information in the form required under the applicable laws of the jurisdiction[s] through which the selected product travels;”

9. The phrase “moving said electronic record via EMF communications links from point to point,” as used in Claim 2 of the ‘364 Patent means “transmitting the electronic record electronically to at least one point and, where necessary and where feasible, between or among other points along the route of passage for the selected product;”
10. The phrase “authorization data,” as used in Claim 3 of the ‘364 Patent means “data relevant to obtaining authorized passage through a point;”
11. The phrase “transfer of payment,” as used in Claim 4 of the ‘364 Patent means “data enabling the electronic record to authorize payment.”

After the Markman hearing, DE filed a motion for reconsideration and motion to clarify.

In an opinion issued March 21, 2006, DE Tech., Inc. v. Dell, Inc., 2006 WL 733967 (W.D. Va. Mar. 21, 2006), the court modified its construction of “international shipping information,” and amended its order of February 14, 2006. “International shipping information” was construed as “any information, including at least all available shipping options and associated costs, related to shipping a product internationally from its point of origination to its point of destination.”

Id. at *2.

At the Markman hearing, the court had granted the parties time to develop their arguments on Claims 13-15 and 17 of the ‘020 Patent. Dell subsequently filed a motion for partial summary judgment of invalidity as to Claims 13-15 and 17. The court granted the motion for partial summary judgment, holding that the means-plus-functions claimed by DE did

not disclose corresponding structures and were therefore indefinite and invalid. DE Tech., Inc. v. Dell, Inc., 428 F. Supp. 2d 512, 522 (W.D. Va. 2006).

Subsequently, pursuant to an amended scheduling order, the parties filed additional motions for summary judgment.² The issues have been fully briefed, and a hearing was held on March 5, 2007. The court will consider each of the motions for summary judgment in turn.

GENERAL STANDARD OF REVIEW

An award of summary judgment is appropriate when “the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue of material fact and that the moving party is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56. For a party’s evidence to raise a genuine issue of material fact to avoid summary judgment, it must be “such that a reasonable jury could return a verdict for the nonmoving party.” Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). The court must view the facts in the light most favorable to the nonmoving party. Eli Lilly and Co. v. Barr Labs., Inc., 251 F.3d 955, 962 (Fed. Cir. 2001). Therefore, for the purposes of the “infringement” section of this memorandum, and in characterizing and summarizing the accused computer processes, all disputes of fact are resolved in the light most favorable to DE.

²Dell had filed the motion for summary judgment as to element (b) of the ‘020 Patent, the currency menu limitation, in September of 2006.

INFRINGEMENT

I. Motion for Summary Judgment of Non-Infringement Concerning the Transaction Program Limitation

Dell asserts that DOMS1200 does not meet the claimed transaction program limitation, because DOMS1200 does not communicate with or send requests to the programs in Dell's website, and does not send requests to TradeSphere. DE responds that Dell's motion must be denied because there are multiple issues of material fact and that Dell's argument is based on an attempt to revive its rejected claim construction.

Dell's accused system utilizes the internet for international commercial transactions. DE claims that Dell's Order Management System ("DOMS"), DOMS1200.SVR and its subroutines ("DOMS1200"), comprise the single transaction program that has been claimed by DE.

The facts concerning the operation of the accused computer program system are not at issue. Often, the operation of Dell's computer process varies depending on whether a customer is in the United States, Canada, Latin America, or elsewhere.³ Dell also divides its sales into two categories: transactional sales, for individuals and small companies, and Premier sales, for larger companies.

In the United States and Canada, transactional and Premier customers place an order online, and the order is placed into a "receipts" database. The data remains there until the "Order Broker" program picks it up and passes it along for processing. Order Broker pulls order information from the receipts database and communicates it to USDOMS for U.S. customers

³As Latin American sales are discussed in detail in regard to Dell's motion for summary judgment of non-infringement as to Dell's Latin American online orders, and these sales do not inform the discussion as to the transaction program, the court will not discuss them in detail in this section.

and CADOMS for Canadian customers, through a program called GEDI. For Premier orders, an additional step is performed within Order Broker.

For U.S. orders, USDOMS takes over and DOMS1400 creates a customer profile, which is written to a shared DOMS database. DOMS1102 then creates a quote after GEDI passes information from the website. DOMS1102 writes information into a “quote file” on a DOMS database, calculates tax, and may re-calculate price. Those values are also written into the quote database. Then, DOMS1200 converts the quote into an actual order. After DOMS1200 receives the message that an order has been placed, DOMS1200 can access the information in the shared quote database. DOMS1200 is triggered by a communication from GEDI, which contains a quote number. According to DE, DOMS1200 draws information from the quote database and communicates it to the order database. DOMS1200 obtains the price of an item and writes the list prices and shipping quotes into the order database.

For payment, price information is communicated to DOMS1200 by GEDI. DOMS1200 sets the order payment status code as “HL,” or hold, and sets a pay code, and sometimes a task code. Downstream applications check for orders in “HL” status, and perform their functions to check credit or ability to pay. When the process is done, the programs change the order status in the database.

For Canadian customers, after an order is entered on the website, DOMS1400 writes customer information to the CADOMS database. GEDI passes information to DOMS1100 for formulation of a quote, and DOMS1100 then writes that information into the CADOMS database. DOMS1100 also communicates with a price database, and a shipping quote is communicated through GEDI to DOMS, and written to the CADOMS database. The total

amount the customer must pay is then calculated. DOMS1200 takes information to create an order, writing necessary information to an order database. Once CADOMS retrieves a quote number from GEDI, CADOMS can communicate with the quote database and access quote files. DOMS1200 takes information into the order database, and writes an order number.

Similar processes occur for other information.

To check credit for transactional customers, Dell uses a program called DOCS. DOCS receives an order from a website, and gives it to a system called EXACT for obtaining a credit card authorization number. This process occurs after an order has been placed on Dell's website. After the credit authorization, Order Broker and GEDI communicate the credit card authorization number back to the online store and DOMS. For Premier customers, the process differs in that a Dell order processor enters credit card information into DOCS and enters the authorization number into Order Broker before information is communicated to DOMS. DOMS1200 makes the determination of how to set the pay code status of an order; the program may determine that additional review is necessary and initiate credit card authorization checking.

TradeSphere is an external program which creates international shipping documents such as the commercial invoice. According to DE, DOMS creates and sends the information that serves as a trigger when DOMS1200 places an order number into a queue called the DRSS queue. Once DRSS locates new order numbers, it obtains information that TradeSphere will need to create shipping documents. This information comes from entries placed in the DOMS database by DOMS1200. The data is transmitted from DRSS to TradeSphere.

The ‘020 Patent claims “[a] computer implemented process for carrying out an international commercial transaction comprising: running a transaction program on a computer system so as to integrate processes [(a) to (h)].” ‘020 Patent, col. 17, ll. 2-5. This term, and the same term in the ‘364 Patent, were construed by the court in its Markman opinion as “running a single transaction program which utilizes and communicates with such additional programs, databases, and systems as are necessary to enable the transaction program to integrate the recited processes (a) to (h) into one functional system for carrying out international commercial transactions.” DE Tech., Inc. v. Dell, Inc., 2006 WL 335608 *5 (W.D. Va. Feb. 14, 2006). This construction was premised on the conclusion that the invention must use one transaction program to integrate the recited processes, “although the invention may make use of other transaction programs.” Id. at *3. In addition, the court concluded that Dell’s proposed construction of “integrate” as “control and execute,” narrowed the claim term in a way inconsistent with the claim language and written description. Id. at *4. As a result, the court construed the claim term “integrate” as “to combine different processes or components into one functional system.” Id.

Now, Dell contends that the transaction program must send information or requests and actively make use of other programs, systems, and databases. The court concludes that this is not correct, however, and that material issues of fact remain as to whether Dell’s DOMS1200 transaction program performs the role necessary to support a finding of infringement.

Therefore, the court will deny Dell's motion for summary judgment of non-infringement as to the transaction program limitation.⁴

In doing so, the court relies heavily on its Markman opinion, DE Tech., Inc. v. Dell, Inc., 2006 WL 335608 (W.D. Va. Feb. 14, 2006). The court examined the language of the claim, the specification, and the prosecution history in construing the claim terms and in reaching the conclusion that one transaction program must combine processes (a) through (h) of the '020 Patent into a single functional system. Id. at *5. However, the court also noted in that opinion that the specification described a system which could include other transaction programs and in which the transaction program did not control and execute processes. Id. at *3, *4. The court's interpretation of the claim limitation indicates that the transaction program does not necessarily command the other programs, systems, and databases. Instead, it correlates them.

Dell's suggested application of "utilize and communicate" goes beyond the court's prior claim construction. Dell suggests that "[a]t a minimum . . . the transaction program send[s] information or requests to other programs, systems and databases so as to enable the transaction program to actively make use of such other programs, systems or databases to perform a particular process and combine the processes into a functional whole. . . . the information sent by the transaction program must include some sort of request that the recited process be performed by that other program, database, or system." Dell's Br. in Supp. of its Mot. for Summ. J. 5. This is not the role of the transaction program claimed by DE in the patent and

⁴Dell's motion includes an argument that if the court denies its motion for summary judgment of non-infringement, TanData Corporation's Progistics prior art system anticipates Claim 1 of the '364 Patent. The court will later address this issue as part of its discussion of DE's motion for summary judgment on anticipation.

claim language, and therefore not the role of the transaction program described by the court in its Markman opinion. The court rejected the notion that the transaction program had to issue instructions, finding that it is sufficient if the transaction program correlates information necessary for a seamless international transaction.

Although the court declines to revisit its Markman holding, it notes that language from the written description of the patent supports its conclusion that the transaction program claimed by DE need not necessarily send information or requests to other programs, databases, or systems. For example, the specification states that “[a]t step 105 a desired catalogue (and its country of origin) is selected and the country of the customer is input to select a default currency, which is used as a trigger to guide the operation or portions of the transaction process once a product or products are selected” ‘020 Patent, col. 5, ll. 12-17. The patent also states that “[t]he transaction system contains or interacts with various databases, including: . . . customer information, including credit and financial data, as well as purchasing records and profiles.” ‘020 Patent, col. 4, ll. 1-19.

The court’s conclusion is also supported by the prosecution history cited by Dell. As Dell notes, DE surrendered a claim for a process in which information is simply passed between programs. Instead, a transaction program must integrate the process steps into one functional system, as the court concluded in its Markman opinion. See DE Tech., 2006 WL 335608 at *4 (finding that DE gave up the interpretation that more than one program could integrate the recited claim processes).

Dell contends that under the court’s construction, a string of programs, each connected to the programs next to it, would fulfill the limitation because no transaction program would be

required. Instead, Dell suggests that the construction requires a central transaction program, connected to each process step. The court agrees with this characterization, as long as the transaction program correlates, rather than commands. The court concludes that a reasonable jury could find DOMS1200 to infringe on this basis. In fact, two diagrams prepared by Dell depict DOMS as just such a program. See Appx. 1 and 2. One diagram was prepared by Dell for internal use, at a time before this litigation began. DE's Opp'n to Dell's Mot. for Summ. J. 5. The document depicts communications between USDOMS and Dell's U. S. websites, and shows DOMS in the center as information comes into DOMS from the online store. The second diagram, from an internal Dell presentation prepared before this litigation, can clearly be interpreted to suggest that DOMS1200 performs a central role. Id. at 7. As described in more detail below, there are material issues of fact as to whether DOMS fulfills the role of the transaction program set forth by the '020 and '364 Patents. The court has described the function of the single transaction program in DE's patents, which "utilizes and communicates with such additional programs, databases, and systems as are necessary to enable the transaction program to integrate the recited processes (a) to (h) into one functional system. . . .," and a reasonable jury could find that DOMS1200 does infringe DE's claimed transaction program.

A. Dell's Website Applications

Dell specifically argues that DOMS1200 does not utilize or communicate with Dell's website applications, and does not send any information or requests to website applications. Based on Dell's suggested interpretation, therefore, Dell's transaction program would not infringe. DE focuses on Dell's improper use of the claim term.

The parties agree as to the role played by DOMS1200, as described above, but disagree as to whether a reasonable jury could find that DOMS1200 integrates the claimed processes. DE claims that DOMS communicates with Dell's websites because information from the websites is sent to DOMS1200. Order Broker takes information from the online store, passes it through GEDI, and sends that data to DOMS1200. After the information is transferred to DOMS, the order can be processed. DE alleges that processes (a) and (b) occur in the Content Application of Dell's website, and process (c) occurs in Dell's online stores.

As discussed above, the court's reading of the patent allows for a role of the transaction program that is broader than that suggested by Dell. Therefore, the role played by DOMS1200, in which it receives information from Dell websites, could constitute infringement of the DE patents. Based on the claimed process, a reasonable jury could find that DOMS1200 infringes the claimed transaction program.

B. Website Applications and the '364 Patent

Dell claims that the court must determine whether the selection of a product to be purchased and the shipping destination for such product in process (a) of the '364 Patent must be received on Dell's website through "computer-to-computer communication" with the buyer. DE claims that this would add an existing limitation to the claim requirements, although DE does not dispute that an order must be made using a computer and a network. DE argues that there is no requirement that the transaction program integrate something that occurred on a website.

The court concludes that DE is correct, and that further construction of Claim 1 of the '364 Patent is unnecessary. The '364 Patent claims "[a] computerized process for carrying out

an international transaction comprising: running a transaction program on a computer system so as to integrate processes including: (a) receiving a selection of a product to be purchased and a destination for shipping such product to be purchased.” ‘364 Patent, col. 15, ll. 13-18. At this point, the court finds supplemental construction to be unnecessary and declines to construe the term further. Furthermore, in light of the court’s conclusions as to the role of the transaction program set forth above, Dell would not be entitled to summary judgment even if the website was required to be integrated.

Dell also claims that accused Canadian credit sales under the ‘364 Patent do not infringe because credit card processing occurs before order information is sent to DOMS. Therefore, according to Dell, the protocol underlying these sales would not infringe. DE claims that Dell’s websites receive an order, triggering an electronic process for confirming the existence of available funds.

Process (d) claims “receiving an order for such product thereby triggering an electronic process for confirming existence of available funds.” ‘364 Patent, col. 15, ll. 30-32. According to DE, Dell’s system could infringe because the receipt of an order occurs on the website, triggering an electronic process for confirming existence of funds, which is integrated by DOMS1200. Although Dell claims that DOMS1200 must receive the order, the court concludes that there are issues of material fact that must be determined by a jury, and denies Dell’s motion for summary judgment.

C. TradeSphere

According to Dell, DOMS1200 fails to send any kind of request to TradeSphere to perform certain processes, and the court must therefore grant summary judgment. DE claims

that using the proper claim construction, DOMS1200 utilizes and communicates with TradeSphere.

TradeSphere is a program which ultimately creates international shipping documents for Dell's accused program. DOMS creates and sends an order number, which is placed in a queue to be read by DRSS. DRSS retrieves information placed in the database by DOMS1200, and sends the information to TradeSphere. TradeSphere then creates shipping documents.

As discussed above, the fact that DOMS1200 does not send a request to TradeSphere does not mean that the transaction program does not integrate TradeSphere. It is sufficient that DOMS integrates TradeSphere by communicating with the program in such a way as to trigger the creation of the international shipping documents.

Therefore, viewing the evidence in the light most favorable to DE, and using the appropriate definitions of transaction program and integration discussed above, the court concludes that there are issues of material fact and that a reasonable jury could find that Dell's process does infringe. The court will deny Dell's motion for summary judgment as to the transaction program limitation.

II. Motion for Summary Judgment of Non-Infringement Concerning the Electronic Record Limitation

Dell claims that its system does not infringe because it does not run a single transaction program to integrate a process for "generating an electronic record, such record including the content of a commercial invoice, to facilitate passage of such product to said destination." '020 Patent, col. 17, ll. 30-33. According to Dell, the system does not literally infringe by generating such an electronic record, and there is not an equivalent to the claimed electronic record limitation under the doctrine of equivalents. DE alleges that there is literal infringement of the

electronic record limitation. Additionally, DE asserts that there is infringement under the doctrine of equivalents because the accused electronic record is substantially the same as the claimed electronic record limitation.

A. Literal Infringement

The electronic record limitation requires that the transaction program generate an electronic record, that the record include the content of a commercial invoice, and that the record facilitate the passage of the product to its destination. The court has construed the term “commercial invoice” to mean “an international shipping document that contains at least the information in the form required under the applicable laws of the jurisdiction[s] through which the selected product travels.” DE Tech., Inc. v. Dell, Inc., 2006 WL 335608 *10 (W.D. Va. Feb. 14, 2006). To prove literal infringement, DE would have to show “that every limitation in the claim is literally met by the accused device.” Kahn v. Gen. Motors Corp., 135 F.3d 1472, 1476 (Fed. Cir. 1998) (internal citations omitted).

In deciding a motion for summary judgment, the court is constrained to view the facts in the light most favorable to the non-moving party. Eli Lilly and Co. v. Barr Labs., Inc., 251 F.3d 955, 962 (Fed. Cir. 2001). Therefore, in its analysis of infringement of the electronic record limitation, the court relies substantially upon the facts set forth in the deposition testimony and expert reports of DE’s international trade expert, Francis Reynolds.

DE claims that a reasonable jury could find that transactions involving shipments from Malaysia and Ireland to the United States and from the United States to Canada literally

infringe.⁵ As discussed above, laptop computers for sales to U.S. customers are manufactured by Dell entities in Malaysia and Ireland, and shipped to the United States. Dell asserts that these transactions do not infringe DE's patents for a variety of reasons, including the fact that the transaction program does not generate the electronic record claimed under the patents at issue. According to DE, these transactions infringe the electronic record limitation because most information required by statute is found on the commercial invoices for the shipments. Furthermore, any information missing from the commercial invoices is in the electronic record or provided by other shipping documents. DE also claims that all information required for shipments from the United States to Canada is found on the commercial invoices and the electronic record.

At his deposition, Reynolds was thoroughly questioned on these issues. He was asked whether "the commercial invoices [he] reviewed for shipments from Malaysia to the United States contain all of the information required by the applicable laws." Reynolds Dep. 48:20-23, Jan. 5, 2007. He responded, "[n]o." Id. at 48:24. Next, he was asked "[d]id the commercial invoices you reviewed for shipments from Ireland to the United States contain all the information required by the applicable laws?," to which he responded "[n]o." Id. at 49:1-5. As to the shipments from the United States to Canada, Reynolds was asked "[d]id the Canada Customs invoice you reviewed for shipments to Canada contain all of the information required by the applicable laws?," and he responded "[n]o." Id. at 49:11-14.

⁵The plaintiff does not argue that Dell's other foreign shipments literally infringe the patent. See DE's Br. in Opp'n to Dell's Mot. for Partial Summ. J. of Non-Infringement 12-13.

Reynolds identified certain pieces of information as “variances,” or information required by government regulation to be on commercial invoices, but not found on Dell’s commercial invoices. Id. at 59:4-7. According to Reynolds, the information would also not be part of the electronic record, unless it was generated by TradeSphere. Id. at 61:24-62:10.⁶ Although Reynolds opined that a variance from the commercial invoice, and not contained in the electronic record, would be insubstantial, the court concludes as a matter of law that these variations are such as to foreclose any finding of literal infringement of DE’s electronic record limitation, as the claimed limitation consists of “generating an electronic record, such record including the content of a commercial invoice” ‘020 Patent, col. 17, ll. 30-32. Therefore, considering the testimony of DE’s own expert to compare Dell’s accused process to DE’s claimed process, the court concludes that no reasonable jury could find that Dell’s shipments from Malaysia and Ireland to the United States or the shipments from the United States to Canada literally infringe the electronic record limitation. As to the issue of literal infringement of the electronic record limitation, the court will grant the motion for summary judgment in favor of Dell as to the transactions involving sales from Malaysia and Ireland to the United States and sales from the United States to Canada.

B. Doctrine of Equivalents

Dell also argues that DE’s theory of infringement under the doctrine of equivalents should be rejected, and that the court should grant partial summary judgment of non-

⁶Reynolds specified that his testimony on the “electronic record” was limited to TradeSphere. At the hearing, DE claimed that some of the missing information was contained in the electronic record of DOMS, rather than TradeSphere. This argument is addressed in the court’s discussion of the doctrine of equivalents.

infringement. According to Dell, the doctrine of equivalents does not apply because DE's proposed application would vitiate the claimed electronic record limitation.

The doctrine of equivalents necessarily "deals with subject matter that is 'beyond,' 'ignored' by, and not included in the literal scope of a claim." Ethicon Endo-Surgery, Inc. v. United States Surgical Corp., 149 F.3d 1302, 1317 (Fed. Cir. 1998). If this were not the case, the analyses for literal infringement and the doctrine of equivalents would be the same. Id. In considering equivalency, the court must view the claim "against the context of the patent, the prior art, and the particular circumstances of the case. . . . [c]onsideration must be given to the purpose for which an ingredient is used in a patent, the qualities it has when combined with the other ingredients, and the function which it is intended to perform." Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 609 (1950). Essentially, the court must consider the functionality of the claimed limitation.

The doctrine of equivalents is limited by the "all elements" rule, and cannot be used "if applying the doctrine would vitiate an entire claim limitation." Seachange Int'l, Inc. v. C-Cor Inc., 413 F.3d 1361, 1378 (Fed. Cir. 2005). Equivalency does not include a structure that has been "specifically excluded" from the claim scope. Athletic Alternatives, Inc. v. Prince Mfg. Inc., 73 F.3d 1573, 1582 (Fed. Cir. 1996).

DE argues that any differences between the accused process and the claimed process are insubstantial. DE recognizes some variances between the commercial invoices produced by the Dell program and the information required by regulation for a commercial invoice. However, DE claims these variances are insignificant: (1) because local authorities do not actually require submission of such information; (2) because much of the information is included in documents

accompanying the commercial invoice; or (3) because supplemental information is added to the commercial invoice by a customs broker or carrier.

The court has concluded that a record that is generated must include at least the contents of a commercial invoice—Reynolds admits that it does not and DE explains this discrepancy away by asserting that information supplied by third parties fills the void. According to Reynolds, the fact that required information does not appear on the commercial invoice is inconsequential because the information needed would be otherwise available to a party arranging import clearance. He testified:

does an electronic record that contains freight costs, is it different from an electronic record that does not contain freight costs, the answer is, yes, it's different. As far as the purpose of import clearance is concerned, the difference is insubstantial, provided another document can be used to provide the freight cost.

Reynolds Dep. 87:21-88:4. Later in his deposition, Reynolds was told to assume that the content of the other documents was not part of TradeSphere, and was asked “what would be your opinion as to whether the electronic record that's within TradeSphere would be insubstantially different from the requirements for commercial invoice under the applicable laws of the applicable jurisdictions?” Id. at 209:9-17. Reynolds again responded, “[i]t would be insubstantial to the extent that the data was furnished by another document, whether that other document was within TradeSphere or anywhere, because the import entry would then take place.” Id. at 209:18-22. The information contained on those other documents could then be used to complete the import entry document. Id. at 64:7-65:6.

The court concludes, however, that this difference is indeed substantial and that the doctrine of equivalents therefore cannot apply. Claim 1 of the ‘020 Patent describes the

integration of processes by the transaction program as including “(h) upon confirmation of availability of said funds, accepting said order, generating an electronic record, such record including the content of a commercial invoice, to facilitate passage of such product to said destination.” ‘020 Patent, col. 17, ll. 29-33. In light of the court’s Markman ruling that the commercial invoice must contain “at least the information in the form required under the applicable laws of the jurisdiction[s] through which the selected product travels,” the claim limitation is not satisfied if information missing from the commercial invoice is not in the electronic record.

In its Markman opinion, the court considered the claim language, specifications, and prosecution history of the ‘020 Patent and the ‘364 Patent, and concluded that one transaction program must integrate processes (a) through (h) of Claim 1 of the ‘020 Patent.. DE Tech., Inc. v. Dell, Inc., 2006 WL 335608 *5 (W.D. Va. Feb. 14, 2006). Furthermore, the court concluded that the processes must be combined into a single functional system. Id. Allowing the electronic record limitation of element (h) to be partially fulfilled by documents attached to the commercial invoice would vitiate these requirements, so that the functionality of the process is not achieved.

As the United States Supreme Court has noted, the most important inquiry when applying the doctrine of equivalents is whether “the accused product or process contain elements identical or equivalent to each claimed element of the patented invention.” Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 40 (1997). This inquiry requires the court to examine the elements and ensure that the application of the doctrine of equivalents does not eliminate any of the elements. Id. In this case, finding Dell’s process to be equivalent to the

electronic record limitation would completely displace the requirement that the generation of an electronic record, including the commercial invoice, be integrated by a transaction program with the other claimed processes. See Ethicon, 149 F.3d at 1319 (upholding summary judgment of no infringement under the doctrine of equivalents where the claim did not contain a specific exclusion, but the accused device was substantially different from the claim). Although the patents at issue do not specifically exclude the use of supplemental paper documents, the accused transactions' use of paper documents to supply components of the commercial invoice involves a substantial departure from the claim limitation, which requires a single transaction program to integrate the generation of an electronic record including the content of a commercial invoice.⁷

In addition, Dell's products could not necessarily be successfully imported without the attachment of supplemental paper documents not generated as part of the electronic record. DE's expert testified that the variances noted were insubstantial, because they would not affect the import clearance. Reynolds Dep. 62:4-7. Instead, “[i]t would just mean that whoever did the import clearance would have to look at another document, in addition to the commercial invoice to affect import clearance.” Id. 62:7-10. Reynolds testified that the difference would be insubstantial because all the necessary information would be available, but also stated that he

⁷For the same reason, the court must reject DE's argument that the statute allows for documents other than the commercial invoice to supply the information required for goods to enter the United States. See 19 C.F.R. § 141.86 (2007). This statutory provision cannot be used to circumvent the requirement of DE's patents that processes must be integrated by the claimed transaction program.

did not know if such a difference would be insubstantial to the content of the electronic record.⁸

Id. 63:1-64:2. According to Reynolds, if the necessary information was not on the commercial invoice, the “fallback position” would be for customs officials to look at documents accompanying the commercial invoice to see if the information is available on those documents.

Id. at 64:13-65:1. At the end of his deposition, Reynolds explicitly testified as to this issue.

DE’s counsel asked about a situation in which a commercial invoice is produced, although some required information is found on an accompanying document but not in TradeSphere: “[i]n that situation, what would be your opinion as to whether the electronic record that’s within TradeSphere would be insubstantially different from the requirements for commercial invoice under the applicable laws of the applicable jurisdictions?” Id. at 209:12-17. Reynolds responded that “[i]t would be insubstantial to the extent that the data was furnished by another

⁸Reynolds had previously testified that the variance would be an insubstantial difference in the content of the electronic record, but later testified that he didn’t know if the difference would be insubstantial in regards to the content of the electronic record:

Q. Is it your opinion that it would also be an insubstantial difference in the content of the electronic record as that term is used in your report?

A. That depends on what document was used to supplement the commercial invoice, whether that document was generated by TradeSphere or not.

Q. And if the document was not generated by TradeSphere, would that still be an insubstantial difference in the content of the electronic record?

A. Yes. . . .

Q. Suppose that the electronic record does not contain the information that is missing from the commercial invoice that you reviewed, but that that information does appear on a document generated by something other than TradeSphere?

A. Yes.

Q. Is it still your opinion that that variance would be insubstantial?

A. It would be insubstantial to the fact that the goods are cleared for import, because the information is available to the party arranging for import clearance.

Q. Would it be insubstantial with respect to the content of the electronic record?

A. I don’t know the answer to that.

Reynold’s Dep. 62:18-64:2.

document, whether that other document was within TradeSphere or anywhere, because the import entry would then take place.” Id. at 209:18-22 (emphasis added). These explanations by DE’s expert confirm that the information contained in documents accompanying Dell’s commercial invoice is critical because the commercial invoice and electronic record do not contain all required information for importation. Although the electronic record could facilitate the passage of Dell’s product, the product could not be imported based solely upon the electronic record generated by Dell’s system. These findings support the court’s conclusion that such a process is not an equivalent to DE’s claimed electronic record limitation.

The court also concludes that the electronic record limitation is not satisfied when information missing from the commercial invoice on the electronic record is located elsewhere in the electronic record. For example, Reynolds’ Expert Report stated that although the invoices examined for shipments from Malaysia to the United States and for shipments from Ireland to the United States did not state when the merchandise was sold or agreed to be sold, the information was elsewhere in the electronic record. Reynolds Expert Report 16, 19. Reynolds stated that the information must be in the electronic record “because the order number appears on the invoice.” Id. at 16; see also id. at 19. This testimony was supported by the statement of DE’s order management software applications expert, Jack Baldwin, who submitted a declaration explaining that the DOMS1200 server stores the date of the order in the order database. See Decl. of Jack T. Baldwin in Supp. of DE’s Opp’n to Dell’s Mot. for Partial Summ. J. At the hearing, DE’s counsel further argued that Dell’s electronic record contains most of the information missing on the printed commercial invoice; therefore, Dell’s process

still infringes because all that is required is that the information be located in the total electronic record.

Even if this assertion is true, the court concludes as a matter of law that merely storing the relevant information is not sufficient to meet the electronic record claim limitation. As the court discussed in its Markman ruling, one of the stated purposes of DE's patented process was to permit a seamless international computer transaction. DE Tech., Inc., 2006 WL 335608 at *3-4. One of the claimed processes includes “generating an electronic record, such record including the content of a commercial invoice” ‘020 Patent, col. 17, ll. 30-32 (emphasis added). Considering the language of the claim, and the court's prior claim construction opinion, the court concludes that the electronic record limitation requires the generation of an electronic record that includes at least the content of a commercial invoice. Although this construction does not require a paper copy of the commercial invoice, the invention cannot serve its claimed purpose unless an electronic record is produced with the necessary information. It is not sufficient for information merely to be available somewhere within Dell's databases. Therefore, DE's evidence that information required for a commercial invoice is somewhere in Dell's system is insufficient as a matter of law to prove infringement of the electronic record limitation by equivalence.

For these reasons, the court is constrained to conclude that no reasonable jury could find that the electronic record limitation is met by an equivalent. The court concludes that Dell's motion for summary judgment as to the electronic record limitation must be granted in part, because the claim limitation is not met when the information necessary for a commercial

invoice is provided by attached documents which are not part of the electronic record generated by Dell.⁹

In its briefs and at the hearing, Dell made an additional argument for partial summary judgment of non-infringement, claiming that Dell's system does not infringe because it does not generate an electronic record of the transport document. However, the court agrees with DE that the electronic record need not include the contents of every document necessary for passage of goods. Stated differently, the court agrees that it is only necessary that the electronic record facilitate the transport of goods. In terms of other documents which may be necessary in order to facilitate transport of goods, the court concludes that there remain material issues of fact concerning whether the accused process is equivalent to the electronic record limitation.

III. Motion for Summary Judgment of Non-Infringement Concerning the Currency Menu Limitation

Dell moves for summary judgment of non-infringement as to element (b) of the '020 Patent, the process of "selecting a currency from a menu in which to obtain price information." Dell claims that its accused system does not include the process of presenting a list of currencies from which customers can make a selection. DE contends that Dell infringes the currency menu limitation by the presentation of a list of countries, each correlated with a currency, from which customers can choose.

A. Literal Infringement

The '020 Patent claims "[a] computer implemented process for carrying out an international commercial transaction comprising: running a transaction program on a computer

⁹Based on this holding, the court finds it unnecessary to address Dell's arguments concerning prosecution history estoppel.

system so as to integrate processes including . . . (b) selecting a currency from a menu in which to obtain price information.” ‘020 Patent, col. 17, ll. 1-9. The court thoroughly considered this claim limitation in its Markman opinion and its subsequent opinion on DE’s motion for reconsideration, and concluded that the proper construction of this limitation must be “choosing a currency after presentation of a currency menu and consideration of user input.” DE Tech., Inc. v. Dell, Inc., 2006 WL 335608 *6 (W.D. Va. Feb. 14, 2006). At that time, the court rejected DE’s proposal that the term should be construed to include default selection of a currency by a customer or computer based on customer choices from a list of information other than currency options. In doing so, the court noted that the plaintiff was attempting to broaden the construction, and held that the customer must always be presented with a currency menu, even if it is merely to override a default selection. Id. See also DE Tech., Inc. v. Dell, Inc., 2006 WL 733967 *1 (W.D. Va. Mar. 21, 2006) (“[t]his requires that the customer be presented with a currency menu, whether the customer chooses to use the override feature or not”).

The relevant facts as to this issue are undisputed. The parties agree that Dell customers are presented with a country menu on the website. See DE’s Opp’n to Dell’s Mot. for Summ. J. 6. When the website quotes a price to a customer, the price is quoted in a currency that Dell has assigned to the country. Id. According to DE, that currency is generally the national currency of the country. Id. at 6-7. If a customer is not satisfied with the currency presented, the customer can return to the country menu and choose another country. Id. at 7. The parties also agree that the customer can only pay in the currency correlated to the destination country of a product. Id. at 19.

DE now claims that Dell's system literally infringes the currency menu limitation, because Dell customers use a menu to make a selection, and that selection results in the prices being displayed to the customer in an associated currency. According to DE, a reasonable jury could find that this constitutes a "currency menu."

The court concludes, however, that this process does not literally infringe upon the process claimed by DE. The court specifically stated in its Markman opinion that customers must be presented with a menu of currencies. No reasonable jury could find that a country menu is synonymous with such a currency menu for the purposes of literal infringement, and the court will therefore grant Dell's motion for summary judgment as to literal infringement of the currency menu limitation.

B. Doctrine of Equivalents

Even in the absence of literal infringement, DE asserts that Dell's display of countries on its website is equivalent to the currency menu claimed under the '020 and '364 Patents. According to DE, there are genuine issues of material fact as to whether there are substantial differences between the claimed process and the accused process. Dell, however, argues that its country menu is substantially different from a currency menu, and that DE is barred by prosecution history estoppel from asserting that Dell's system meets the currency menu limitation under the doctrine of equivalents.

1. Prosecution History Estoppel

The application of the doctrine of equivalents is limited by prosecution history estoppel Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 30 (1997). In order to determine whether prosecution history estoppel applies, the court must make a three-part

inquiry, as laid out in Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 344 F.3d 1359 (Fed. Cir. 2003). The first issue is whether an amendment filed in the Patent and Trademark Office has “narrowed the literal scope of a claim.” Id. at 1366. If the accused party can establish that the amendment was narrowing, the second issue is “whether the reason for that amendment was a substantial one relating to patentability.” Id. There is a presumption that the amendment was based on a substantial reason relating to patentability if the prosecution history record does not demonstrate a reason for the narrowing amendment. Id. at 1366-67. Once the court concludes that a narrowing amendment has been made for a substantial reason relating to patentability, the third issue concerns “the scope of the subject matter surrendered by the narrowing amendment.” Id. at 1367. There is a presumption that “all territory between the original claim limitation and the amended claim limitation” has been surrendered. Id. The patentee may rebut this presumption in several limited ways. Id.

Therefore, this court must first determine whether DE narrowed the scope of the currency limitation by an amendment filed in the Patent and Trademark Office. The ‘020 Patent has a tortured prosecution history. On February 13, 2002, DE submitted one in a series of many amendments, changing the claim language from “determining a currency” to “selecting a currency from a menu.” Feb. 13, 2002 Am. 2. Dell claims that this amendment narrowed the claim scope. The court agrees that this is a proper characterization of the amendment. By changing the description of claim (b) to “selecting a currency from a menu,” the patentees added the additional requirement that the currency must be chosen from a menu of options. With the phrase “determining a currency,” there was no such requirement.

The court must next inquire whether the narrowing occurred for a substantial reason related to patentability. When the record does not reveal the reason for a narrowing amendment, this court is entitled to presume that the patentee made the amendment for a substantial reason related to patentability. Festo, 344 F.3d at 1366-67. In determining whether DE has overcome this presumption, the court is charged to consider only the evidence in the prosecution history record. Id. at 1367.

DE claims that this presumption is overcome, arguing that the prosecution history of the ‘364 Patent demonstrates that the “from a menu” language was not made for purposes of patentability. According to DE, the fact that the examiner agreed to issue the ‘364 Patent with these elements removed is conclusive proof that the amendments to the ‘020 Patent were not made for purposes of patentability. However, Dell cites to the prosecution history of the ‘364 Patent in support of its claim that the amendment was made for a substantial reason related to patentability.

In DE’s response to the examiner’s Office Action of August 1, 2001, the applicant claimed “[a] computerized process for carrying out an international transaction comprising . . . determining a currency in which to obtain price information.” Resp. to Aug. 1, 2001 Office Action 1. The examiner later rejected this claim under 35 U.S.C. § 112 as indefinite for “failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.” Nov. 20, 2002 Office Action 3. Furthermore, the examiner found the claim “incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections.” Id. The examiner identified one such omitted relationship as between the determined currency and the limitations

that followed in the same claim. Id. At the time, DE noted its disagreement with the examiner on the basis that “virtually identical language” was approved for the ‘020 Patent. Resp. to Nov. 20, 2002 Office Action 7. However, DE did remove the currency step, noting that it had “not relied upon the disputed step[] . . . to distinguish the claimed inventions.” Id. at 8.

Upon review of the prosecution history, the court concludes that it is unclear whether the “selecting a currency from a menu” language was changed for purposes of patentability. DE’s argument that the language was not necessary to distinguish the patent over prior art is not entirely germane. Because the inventors removed the entire claim limitation, it is not clear whether the limitation could have been distinguished from the prior art based upon different language. However, Dell’s argument is also imprecise; it appears from a review of the prosecution history as if the examiner’s November 2002 rejection was based on issues other than whether a currency was simply “determined” or “selected from a menu.”

Based on this analysis, and given the presumption created by the governing caselaw, the court concludes that the narrowing amendment was made for a substantial reason related to patentability. Because the prosecution history of the ‘364 Patent does not sufficiently inform the choice of words as to the ‘020 Patent, the presumption that the amendment was made for purposes of patentability must prevail. As a result of this presumption, the court also finds unconvincing DE’s arguments that Dell has failed to find a document in the prosecution history that supports its claim and that the examiner did not mention this element in his § 112 rejections.

The court has concluded that the “selecting a currency from a menu” amendment was narrowing and made for a substantial reason relating to patentability. DE therefore has

surrendered all territory “between the original claim limitation and the amended claim limitation.” Festo, 344 F.3d at 1367. The court agrees with DE, however, that the proposed equivalent of selecting a country from a menu does not fall between the original claim limitation and the amended claim limitation. Therefore, application of the doctrine of equivalents is not barred by prosecution history estoppel.

Dell’s accused process, in which a customer chooses a country from a menu, falls within the claim limit “selecting a currency from a menu.” Although the court’s Markman construction requires the presentation of a currency menu, this requirement cannot be imposed on the claim “selecting a currency from a menu” for the purposes of prosecution history estoppel. In construing a claim term, the court must consider the language of the claims, the specification, and the prosecution history. See DE Tech., Inc., 2006 WL 335608 at *1 (citing Markman, 52 F.3d at 979). The primary consideration for prosecution history estoppel is “what a competitor was reasonably entitled to conclude, from the prosecution history, that the applicant gave up to procure issuance of the patent.” Haynes Int’l, Inc. v. Jessop Steel Co., 8 F.3d 1573, 1578 (Fed. Cir. 1993). The patentee’s change from “determining a currency” to “selecting a currency from a menu” narrowed the claim, but the additional requirement that the menu be a currency menu is not applicable to the prosecution history estoppel analysis. The court holds that a competitor would not conclude from the prosecution history that the patentee gave up menus other than currency menus; prosecution history estoppel therefore does not bar the application of the doctrine of equivalents to claim (b) of the ‘020 Patent.

2. Equivalency

The next issue is whether a reasonable jury could find that Dell's list of countries, each correlated with a single currency, is the equivalent of selecting a currency from a menu. Dell argues that its program does not infringe because its country menu is substantially different from DE's claimed process.

Summary judgment is appropriate only if there is no genuine issue of material fact such that no reasonable jury could find equivalence. Vehicular Tech. Corp. v. Titan Wheel Int'l, Inc., 212 F.3d 1377, 1381 (Fed. Cir. 2000). Under the doctrine of equivalents, an accused process infringes if it is insubstantially different from the claimed process, from the perspective of a person of ordinary skill in the subject area of the patent. Athletic Alternatives, Inc. v. Prince Mfg. Inc., 73 F.3d 1573, 1581 (Fed. Cir. 1996). Although the doctrine of equivalents allows a court to find infringement even in the absence of literal infringement, it does not permit a court to ignore "structural and functional limitations of the claim." Id. at 1582.

The United States Supreme Court has held that a court applying the doctrine of equivalents analysis must determine whether "the accused product or process contain[s] elements identical or equivalent to each claimed element of the patented invention." Warner-Jenkinson, 520 U.S. at 40. As the Court noted, "[a]n analysis of the role played by each element in the context of the specific patent claim will thus inform the inquiry as to whether a substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element." Id.

One method for assessing whether an accused process infringes under the doctrine of equivalents is to determine whether the accused process is insubstantially different from the

claimed invention. See Vehicular Tech., 212 F.3d at 1380. In Vehicular Technologies, the Federal Circuit held that an accused device that did not perform a function thought to be key “could rarely, if ever, be considered to be insubstantially changed from the claimed invention.” Id. at 1382. That case involved a differential mechanism, and the accused device included all of the claim limitations except a “spring assembly consisting of two concentric springs” Id. at 1379. In considering the role of the limitation in the claimed invention, the district court found that an important function of the limitation was “improving reliability.” Id. at 1381-82. Furthermore, the court concluded that the reliability enhancement function was key to the claimed invention, and that a device which did not perform a central function could rarely be considered “insubstantially changed” from the claimed device. Id. at 1382. Relying on the claim language, the court held that the claim language expressly required two springs, and that no reasonable jury could conclude that a device with a spring-plug assembly was insubstantially different. Id. at 1383.

For the purposes of analyzing the currency menu limitation in the ‘020 Patent, the court finds the reasoning in Vehicular Technologies instructive, and adopts the “insubstantial differences test” used by the Federal Circuit in that case. Using the approach implicit in the insubstantial differences test, the court must first consider the role of the currency menu limitation in the claimed process. See id. at 1381.

The written description of the ‘020 patent repeatedly provides that the function of the currency menu is to facilitate worldwide comparison shopping.¹⁰ For example, the preferred embodiments describe that:

[t]he system is set up so any or all countries of customers can be linked to any language and prices converted to any currency. However, in practical terms some products will not be available in all countries nor appropriate for all countries. Once the language has been determined and the currency has been selected, the customer is then able to review product listings that have prices that reflect the currency and taxes of the country in which the customer resides.

Id. at col. 4, ll. 35-43. A customer “has the option of selecting a particular currency . . . in which he wants the catalogue price of the selected products. The currency conversion is carried out . . . from the currency of the country in which the catalogue originates to that selected by the customer.” Id. at col. 5, ll. 61-67. Therefore, the “clear disclosures and assertions in the patent itself” establish that the currency menu limitation serves the function of allowing customers to shop internationally and compare prices in the same currency. See Vehicular Tech., 212 F.3d at 1382. Furthermore, these portions of the written description support the claim language, which requires the integration of “selecting a currency from a menu in which to obtain price information.” ‘020 Patent, col. 17, ll. 8-9. Based on the written description and the claim language, the court concludes that the function of the currency menu limitation in the claimed process is to enable worldwide comparison shopping.

¹⁰The court does agree with several of DE’s arguments about the role of the currency menu limitation, noting that a customer need not necessarily be able to choose the currency from his own country, and need not necessarily be able to choose a currency from a limitless number of options.

The next step in the court's analysis is to determine whether the worldwide comparison shopping function is "key" to the claimed process. See Vehicular Tech., 212 F.3d at 1382. The court concludes that there is no issue of material fact as to the importance of the worldwide comparison shopping function, because the patent claims and specification make clear that worldwide comparison shopping is a key feature of the claimed invention. The specification of the '020 Patent states that "[i]t is still another object of the present invention to provide a transaction system whereby a buyer can go shopping by computer almost anywhere in the world so that the buyer is able to compare products from different countries on a global scale." '020 Patent, col. 3, ll. 23-27. The written description states that "[p]referably, the user is provided with a plurality of different catalogues from among which to select . . . there must be pre-translated versions of catalogues in non-English languages, thereby allowing real time access of each of the catalogues in a plurality of different languages." Id. at col. 5, ll. 3-9. The preferred embodiments also describe that a customer should be able to search in one or all catalogues. Id. at col. 5, l. 49. In addition, the portions of the written description quoted in regard to the currency menu limitation clearly describe the international comparison shopping function of the claimed process. The court therefore concludes that the worldwide comparison shopping function is key to DE's claimed process.

In Vehicular Technologies, the Federal Circuit held that an accused device which does not perform a key function could "rarely, if ever, be considered to be insubstantially changed from the claimed invention." 212 F.3d at 1382. As the court has determined that worldwide comparison shopping is a key function of the process claimed by the '020 Patent, it must next consider whether Dell's accused program performs this key function. The court concludes that

it does not; Dell's program simply does not permit the worldwide comparison shopping which is one of the underlying objectives of the '020 Patent.

The absence of a currency menu underlines the fact that the Dell system does not permit performance of the worldwide computer shopping function. DE claims that the functionality of Dell's list of countries, each correlated with a currency, is equivalent to that of the claimed currency menu. However, the list of countries does not permit the function of international comparison shopping. According to DE's description, a customer selects a currency by his choice of country. If a customer wishes to use another currency, he can merely use the "back" button on his browser to return to the country menu and select another country. To order a product, the customer must be using the website for the country to which the product will be shipped. This process, however, clearly does not perform the function of enabling worldwide comparison shopping. As Dell observed in its brief, a customer with a shipping address in the United States cannot select the website for France to view a price in Euros and place an order on that website. Dell's Br. in Supp. of its Mot. for Summ. J. 20.

Furthermore, a customer cannot see a display of a bottom line price for the same product in different countries so as to permit the claimed comparison shopping. DE itself recognizes that a currency selection should allow a customer to obtain price information. Opp'n to Dell, Inc.'s Mot. for Summ. J. of Non-Infringement 19. The preferred embodiments describe that "[o]nce . . . the currency has been selected, the customer is then able to review product listings that have prices that reflect the currency and taxes of the country in which the customer resides." Id. at col. 4, ll. 40-43. However, despite DE's claim of equivalence, the Dell system does not allow a customer to compare products from different countries in a way that reflects the

currency and taxes of the customer's own country. For example, a customer cannot see a price of a product shipped from France to the United States, including costs such as import clearance costs. A customer can only view the total cost of the product selected on the website for the country in which he lives. Even if a customer used the "back" button, as suggested by DE, the price reflected on Dell's French website in Euros will never include expenses such as import clearance costs for the United States. Part of the purpose of allowing a customer to choose the currency, in the integrated transaction claimed by DE, is that the customer can compare products from different countries, receive accurate information about the total cost of the product, and ultimately purchase the product.

The court concludes that a reasonable jury could not find infringement by equivalents of DE's claimed process. First, the claim language requires selection of a currency from a menu. See Vehicular Tech., 212 F.3d at 1382. Second, the court has concluded that the function of the currency menu limitation is to allow worldwide comparison shopping, and that the worldwide comparison shopping function is a main function of DE's invention. As the Federal Circuit has held, "an accused device which does not perform this central function could rarely, if ever, be considered to be insubstantially changed from the claimed invention." Id. Dell's list of countries does not perform the function of the claimed currency menu limitation, and it does not allow worldwide comparison shopping. Indeed, DE's position in this case in general is substantially undercut by the fact that the accused program was not written to facilitate comparison of competing products and is, instead, designed to enable the buyer to evaluate and purchase different permutations of the same product.